

4-1965

## A New Look at Bermudagrass and Zoysia for Iowa Lawns

Eliot C. Roberts  
*Iowa State University*

A. E. Cott  
*Iowa State University*

Follow this and additional works at: <https://lib.dr.iastate.edu/farmscience>



Part of the [Agriculture Commons](#)

---

### Recommended Citation

Roberts, Eliot C. and Cott, A. E. (1965) "A New Look at Bermudagrass and Zoysia for Iowa Lawns," *Iowa Farm Science*: Vol. 19 : No. 10 , Article 3.

Available at: <https://lib.dr.iastate.edu/farmscience/vol19/iss10/3>

This Article is brought to you for free and open access by the Extension and Experiment Station Publications at Iowa State University Digital Repository. It has been accepted for inclusion in Iowa Farm Science by an authorized editor of Iowa State University Digital Repository. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).



# A NEW LOOK AT BERMUDAGRASS AND ZOYSIA FOR IOWA LAWNS

They're good hot weather grasses, are disease resistant and can be mowed shorter than bluegrass. But they stay green only 4 or 5 months of the year. Here's an evaluation of their advantages and their limitations.

by **Eliot C. Roberts and A. E. Cott**

**Z**OYSIA and Bermudagrass have for years been used successfully in lawns and as turfgrasses on baseball and football fields in Kansas and Missouri. But is there a place for warm season zoysias and Bermudagrasses as far north as Iowa?

Evaluations of these grasses at Iowa State University have helped provide an answer to this question.

## Bluegrass Limitations . . .

The most serious limitation of

Kentucky bluegrass as a lawn turf is its lack of vigor during hot weather. Bluegrasses are susceptible to disease and often become so weakened that weeds take over during summer months. Kentucky bluegrass must be clipped at a height of about 1½ inches. Many home owners prefer a grass that can be cut shorter.

Warm season grasses such as Zoysia and Bermudagrass have excellent summer vigor and may be clipped closer than bluegrasses. On the other hand, there are several limitations to the use of zoysias and Bermudagrasses.

Let's examine some of the advantages and limitations that should

be understood before planting a new lawn.

## Advantages of Zoysia . . .

Zoysia flourishes during hot weather when bluegrasses and other cool season grasses are weakest. This means that during the warm weather of June, July and August when you want good turf the most, Zoysia is at its best.

All commercial varieties of zoysia tested are winter hardy in central Iowa except Emerald zoysia. And even Emerald will survive Iowa winters in protected locations near buildings.

Zoysia forms a thick sod once it becomes established. Its tight sod makes weed invasion difficult. While actively growing the turf is tough and wear resistant and excellent for heavy use areas.

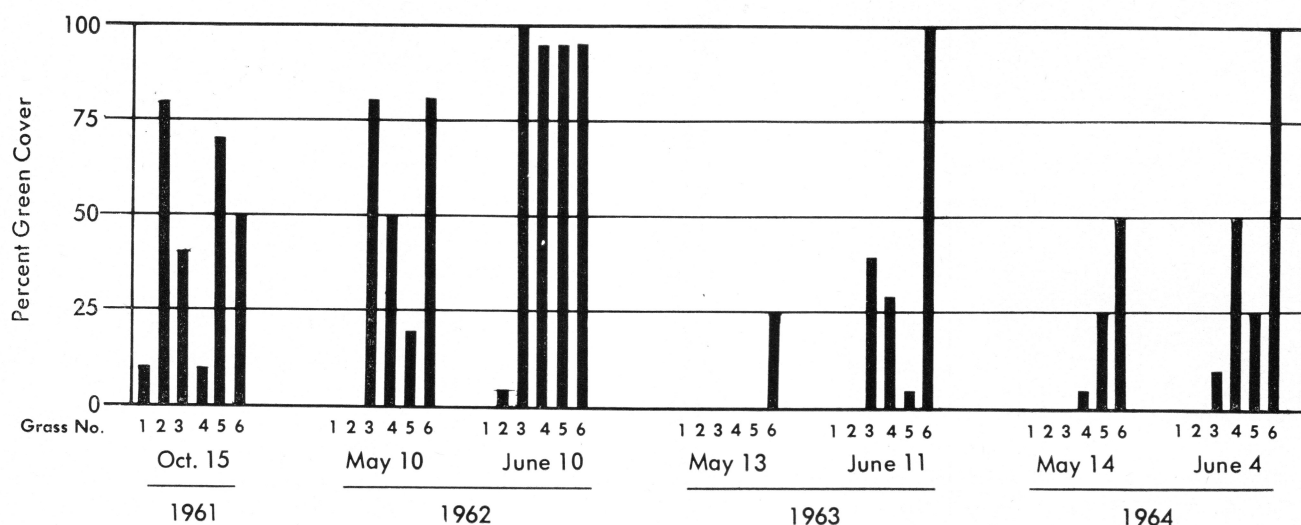
Zoysia develops a good, deep root system that helps make the turf resistant to drouth injuries.



This Zoysia lawn is an example of uniform weed free turf that can be easily produced during midsummer in central Iowa.



Figure 1. Percentage of green Bermudagrass turf in plots at various times of the year for six varieties.



This grass is relatively slow growing. It generally looks best when mowed about once a week to about  $\frac{1}{2}$  to 1 inch. In general zoysia requires about the same rate of fertilization as bluegrass once it is established.

Zoysia has a wide range of adaptation to soil conditions. If well fertilized, it does well on poor, sandy or gravel-like soils.

Zoysia is resistant to common lawn diseases and is not damaged by insects any more than bluegrasses.

### Limitations of Zoysia . . .

Zoysia does not stay green all year. In fact, bluegrasses "green up" a good month to six weeks before zoysia which loses its color shortly after the first frost in the fall. This is usually one to two months before bluegrasses enter winter dormancy. During this six to seven month period from November through May, zoysia has a pale brown to straw color. It will not "green up" during short warm spells as bluegrasses do.

In Iowa the average date of last frost in spring varies from April 25 in the southeastern part of the state to May 10 in the northwest and northeast. The average date of first frost in fall varies from September 25 in northwest and northeast to October 10 in the southern part of the state.

The brown color of zoysia may be diminished during cool periods by tinting the grass green. Mala-

chite green or special tints and dyes are available for this purpose.

Zoysia is not wear resistant during its dormant period. Regular traffic in the same path wears off the frosted or killed tops, exposing the live crowns and stems which may be unable to survive the winter. The grass must then grow in from the sides, sometimes taking two seasons to cover the old path.

Zoysia is usually planted by placing 2 to 2½ inch diameter plugs or sprigs in the soil at regular 1 foot intervals — a time consuming process. In addition, zoysia does not fill in rapidly even when heavily fertilized and watered. Unless

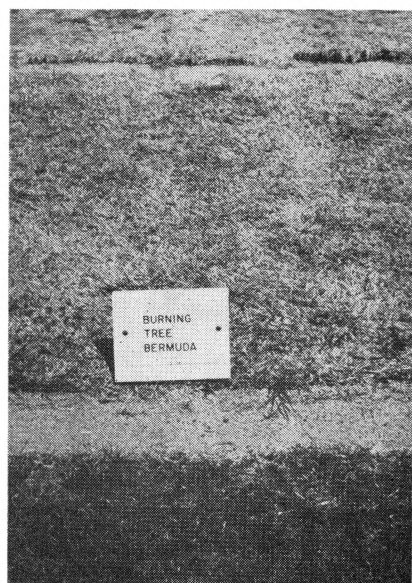
other grasses are seeded in between the plugs or sprigs, weeds develop and the lawn looks patchy for three to four years while the zoysia fills in.

Zoysia Japonica may be established from seed. Spring plantings sometimes produce poor stands of grass by fall. However, an overwintering of seed in the soil seems to improve germination so that more dense stands of zoysia occur during the summer following a fall seeding.

Whenever zoysia is seeded, it should be used in mixtures of bluegrasses and creeping red fescues so that bluegrass cover will be



Zoysias and Bermudagrasses lose their green color after the first frost in the fall and stay brown until late the following spring.



Burning Tree is one of the most winter-hardy Bermudagrasses for central Iowa. But by mid-spring the turf is still dormant with little sign of life.

present until the zoysia becomes established and takes over.

## Advantages of Bermudagrass . . .

Bermudagrasses become established from seed or sprigs in short time following a late spring planting. Plants fill in quickly to form a tight plant cover. Since these grasses do best during hot weather, seeding before mid-June is not recommended.

Bermudagrasses require hot weather for best growth. Thus they are most competitive when lawn weeds are a potential threat to a beautiful lawn.

Bermudagrasses develop deep root systems which help them withstand hot dry weather. However, these grasses are responsive to water and fertilizer and produce rapid growth under these conditions. Bermudagrasses should be clipped frequently at a  $\frac{1}{2}$  to  $\frac{3}{4}$  inch height.

These grasses are resistant to diseases which attack cool season grasses in this area. However, Bermudagrasses are injured by so-called "Spring Dead Spot." The exact nature of this disease problem is not known, but it does cause serious injury to the turf. To date effective control measures have not been worked out.



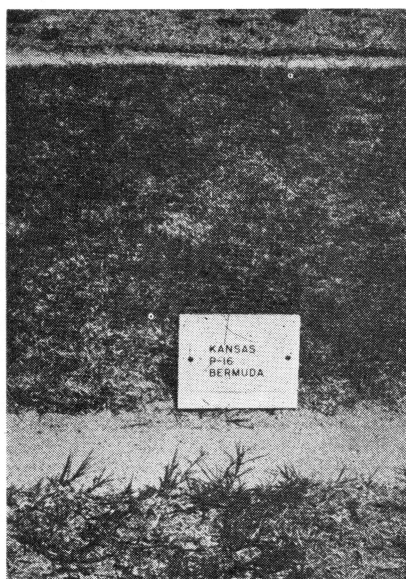
By early summer, there is still evidence of winter injury in Burning Tree Bermuda.

## Limitations of Bermudagrass . . .

Bermudagrasses which may be established from seed are not winter hardy in Iowa, and those commercially available from sprigs vary in winter hardiness. Only Royal Cape and Burning Tree Bermudas have recovered completely from winter injury in this area by early July. Other varieties normally fill in by late July or early August. The recovery is directly related to the extent of winter injury in the sod. Figure 1 shows the variation in recovery and "greening-up" of different Bermudagrass varieties.

Open winters free of snow accumulations favor winter injury. Where Bermudagrasses are protected by snow cover, winter injury is less. Polycross Bermuda selections from Kansas State University have shown improved winter hardiness under Iowa conditions. The variety P-16 has good winter hardy characteristics at Ames.

Bermudagrasses are more sensitive to frost than zoysias. They turn brown in color when first frosted and remain this way until mid to late May. Once they have lost their color it does not return even though short warm spells of fall and spring may be favorable for growth.



P-16 Bermudagrass developed at Kansas State University recovers from winter dormancy faster than other varieties. By mid-spring, P-16 (above) produced a good cover of green grass.

These grasses may be tinted green during periods of dormancy. Bermudagrass produce a turf that "colors up" well when properly sprayed with a lawn tint.

## Points to Consider . . .

Here are some points to consider in deciding to plant these warm season grasses.

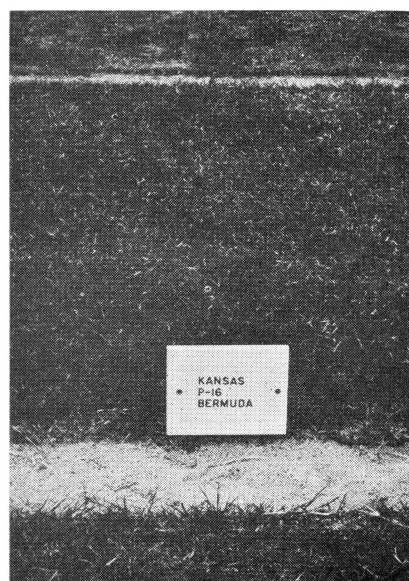
1. Zoysia flourishes during hot weather, resists common lawn diseases and drouth injury, adapts to a wide range of soil conditions, and forms a thick sod which while actively growing is wear and weed resistant.

2. Bermudagrass also flourishes during hot weather, resists drouth and resists diseases common to cool season grasses.

3. Zoysia will need some extra care while it is becoming established.

4. A certain amount of experimenting with Bermudagrass varieties may be required to find the one most winter hardy in your location.

5. These warm season grasses are green for only four to five months of the year, but a green dye may be used to provide color during the dormancy period. Turf is easily scuffed away when dormant.



By early summer, there was no evidence of winter injury in this plot of the Kansas P-16 Bermudagrass.